Case Report

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Heterotopic Pregnancy: A Challenge in Early Diagnosis

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ABSTRACT

Heterotopic pregnancy is the simultaneous existence of intrauterine and extrauterine gestation. It is usually seen in women at risk for ectopic pregnancy or those undergoing fertility treatments. The incidence has dramatically risen to 1 in 3900 of pregnancies via assisted reproductive techniques or ovulation induction, compared to 1 in 30000 of spontaneous conception. Besides this, history of pelvic inflammatory disease (PID), tubal damage, pelvic surgery and prior tubal surgery can increase its risk. Here we present a case of heterotopic pregnancy which was diagnosedafter ectopic gestation ruptured along with compromised intrauterine gestation and maternal condition. Earlier diagnosis before this life-threatening event could have saved the intrauterine fetus.

Keywords: Extrauterine pregnancy; heterotopic pregnancy; ruptured ectopic.

INTRODUCTION

Heterotopic pregnancy is the coexistence of intrauterine and extrauterine gestation. It is a rare occurrence.[1-4]Extrauterine gestation usually occurs in fallopian tube and uncommonly in cervix or ovary.[3,4]

It was first reported in 1708 by DuVernay as an incidental finding of intrauterine pregnancy during an autopsy of a patient who died due to ruptured ectopic pregnancy. Over the last decades there has been a significant increase in occurrence of heterotopic pregnancy that has been attributed to several factors including higher incidence of pelvic inflammatory disease and the extended use of assisted reproductive techniques.[1,5,6]

CASE REPORT

A 23 years primigravida at seven weeks of gestation presented to our emergency department with sudden onset of lower abdominal pain and per vaginal bleeding for eight hours. On examination, she was ill-looking with pallor, weak pulse and a low blood pressure. Abdomen was diffusely tender with guarding and rigidity.

Ultrasonography of the abdomen and pelvis showed intrauterine pregnancy without cardiac activity, and an extrauterine pregnancy along with blood collection in the pouch of Douglas. Her urine pregnancy test was positive, and hemoglobin was 7.1 gm/dl. A provisional diagnosis of heterotopic pregnancy with ruptured ectopic pregnancy was made.

Exploratory laparotomy was performed. Intraoperatively 1500ml of hemoperitoneum was evacuated with findings of ruptured left interstitial tubal pregnancy along with an intrauterine pregnancy. Left salpingectomy was performed, and manual vacuum aspiration was done to remove the nonviable intrauterine product of conception. Postoperatively, five pints of whole blood was transfused, and patient recovered well after the procedure.

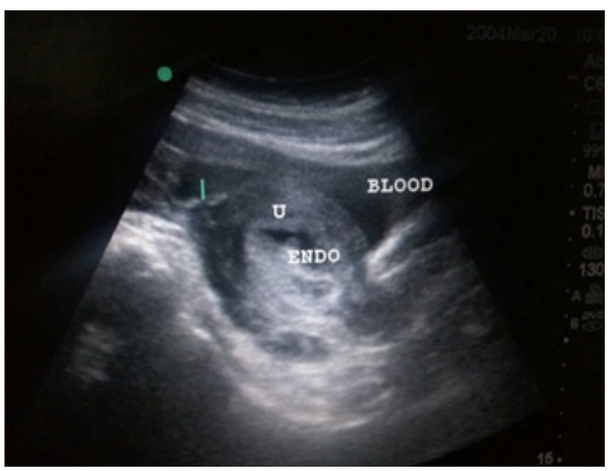

Figure 1. USG showing intrauterine gestation of approximately seven weeks.

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Figure 2. Hemoperitoneum along withproduct of conception following laparotomy and MVA.

DISCUSSION

Heterotopic pregnancy is defined as the presence of multiple gestations.[4,6] Majority of the reported heterotopic pregnancies are of singleton intrauterine pregnancies. Triplet and quadruplet heterotopic pregnancies have also been reported, though extremely rare.[3,6]

Heterotopic gestation is becoming more common with the increasing use of assisted reproductive techniques. It occurs in 1 in 30,000 of spontaneous pregnancies, 1 in 900 in clomiphene citrate induced pregnancies, and rises to 1 in 100 in assisted reproduction.[1,5] Risk factors for ectopic gestation are pelvic inflammatory disease (PID), tubo-ovarian abscess, previous ectopic pregnancies, previous tubal/pelvic surgery etc.[1,6]

Due to rarity of spontaneous heterotopic pregnancy, early diagnosis is often missed and delayed. The presence of an intrauterine pregnancy, either viable or not, may mask the ectopic component of a heterotopic pregnancy, resulting in delay of diagnosis. Often the diagnosis is made during the potentially life-threatening presentation.

On the other hand, the presence of a pseudo sac can provide false positive diagnosis. A pseudo sac is defined as any sac in the absence of a double decidual sac or a yolk sac.[6,7]Ultrasonographic visualization of cardiac activity in both intrauterine and extrauterine gestations is important for diagnosis of heterotopic pregnancy.

The treatment of a heterotopic pregnancy is laparoscopy/ laparotomy for the tubal pregnancy.[3]

In the present case, the intrauterine pregnancy and extrauterine pregnancy were discovered simultaneously via ultrasound following the acute presentation. Surgical management was done to remove the ruptured extrauterine pregnancy and manual vacuum aspiration (MVA) was performed to remove the nonviable intrauterine pregnancy.

With early diagnosis and surgical treatment of the extrauterine gestation, 70% of the intrauterine pregnancies will reach viability.[2] All operated patients with heterotopic pregnancy must be followed up with clinical examination, and subsequent ultrasonography of the on-going intrauterine pregnancy.[1]

CONCLUSIONS

A precise imaging of adnexa of the uterus is of paramount importance along with the visualization of normal pregnancy in the uterus during theroutine antenatal scan. This will help establish timely intervention andavoid the life-threatening presentation associated with heterotopic pregnancy thus limiting the degree of complication and assuring favorable outcome for the developing intrauterine pregnancy.

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